Engineering Analysis Subsystem Environment (EASE) for Spacecraft Power Subsytem Mission Operations

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For spacecraft sent to explore outer space, important aspects of mission operations of spacecraft are: engineering subsystem performance analysis, characterization, and commanding, all involving a substantial amount of human resources and time. Recent efforts have brought about several productivity enhancement measures within the mission operations area that include: the streamlining of the operations process (planning, sequencing, monitoring, analysis) and the development of a multi mission operations environment to support automation in analysis.

Earlier we reported on the development of an integrated S/C Engineering Analysis Subsystem Environment (EASE) prototype. EASE is a collection of software programs on networked workstations providing a multimission, multi subsystem, environment that enables the operation of several S/C simultaneously with, fewer analysts. Through the use of automated tools, graphical data visualization and information management, increase in productivity is achievable. The EASE prototype has been in use for some time in mission operations facilities for monitoring Galileo and Magellan S/C telemetry data.

Recently, a dedicated database and a trending tool have been added to EASE. The paper will discuss these enhancements and provides an update of the operation experience with realtime GLL telemetry data.